

## PROBLEMS AND PROSPECTUS OF GHERKIN CULTIVATION THROUGH CONTRACT FARMING IN TAMIL NADU

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### ABSTRACT

*The study was conducted to identify the type of linkage and problems of gherkin cultivation in contract farming. The results indicated that 85.00 per cent of gherkin growers expressed that the seed materials and cultivation details were supplied by the company, 85.00 percent of them were selling their gherkins to the contract company. Cent percent of gherkin farmers had adopted the spacing, 58.33 per cent of them were partially adopted the seed rate and 65.00 percent of them were adopted the other intercultural operations like staking of gherkin crops. Half of the gherkin farmers (55.00 per cent) have adopted the harvesting schedule as per the recommendations. None of the gherkin farmers were adopted the grading of gherkins after harvest.*

**KEYWORDS:** *Gherkin Cultivation, Contract Farming & Problems*

**Received:** Nov 20, 2017; **Accepted:** Dec 09, 2017; **Published:** Jan 05, 2018; **Paper Id.:** IJASRFEB20185

### INTRODUCTION

Gherkin cultivation in India is driven largely by contract farming. Gherkin is an export oriented vegetable (cucurbit) crop. Karnataka state accounts for almost 90 per cent of exports of preserved gherkins. Gherkin cultivation is largely driven through contract farming. (Venu Prasad et al. 2013) The lack of domestic marketing is one of the reasons for the success of gherkin contract farming. Contract farming is defined as a system of production and supply of agriculture and horticulture produce by farmers under forward contracts. It basically involves four things; pre-agreed price, quantity or acreage quality and time. Contract farming is a case for bringing the market to the farmers' field. Gherkin crop is cultivated under total contract type in India, under which the contracting firm supplies and manages all inputs on the farm and farmer is just a supplier of land and labor. Even though the cultivation of gherkins is an extremely laborious process, the contract farming makes farmers to cultivate the gherkin crops. The dimension such as resource poor farmers and high cost of planting material and these are nominated as high input cost. This could be due to the higher charge of inputs by the firm. (Manjunatha and Prasad (2012). Nearly one lakh small and marginal farmers are involved in gherkin farming in Karnataka and the State produced 2.65 lakh tonnes of gherkin in 50,000 hectares of land in 2010-11 (Prabhu, 2011). Gherkin cultivation is profitable to the farmers and creates employment opportunities throughout the cropping period. It benefits the nation through foreign exchange earnings and promotes investments in processing and exporting units. The product has a negligible domestic market as it is not palatable to Indian taste, but it is a major dietary constituent to many European countries and USA. Hence, almost the entire volume of gherkin produced in India is exported, with little or no domestic demand, except for some star hotels. The production of gherkins in India is concentrated in the three southern states, viz. Karnataka, Tamil Nadu, and Andhra Pradesh. Karnataka accounts

for almost 60 per cent of the total gherkin production and Tamil Nadu and Andhra Pradesh account for 20 per cent each.. Keeping this in view the present study was conducted to study the nature and type of market linkages and services between companies and contract farmers, to assess the extent of adoption and the economic return to the farmers in contract farming and to identify the problems faced by contract farmers in contract farming

## MATERIALS AND METHODS

The Study was conducted in Dindigul and Sivagangai Districts of Tami Nadu. In Tamil Nadu Dindugal and Sivagangai districts were selected purposefully where the gherkins crop cultivated in major areas. In Dindugal, sanarpatti block was selected puroposefully where the gherkin crop is cultivated in most area. In Sivaganga district S. Pudur block was selected purposefully . Sanarpatti village in Sanarpatti block and Kulathupatti village in S. Pudur block was selected purposefully . Thirty gherkin growers were selected from the Sanapatti village of Dindugal district randomly and thirty gherkin growers were selected from the Kulathupatti village of S. Pudur block of Sivaganga district randomly for the study. The nature and type of linkages between companies and gherkin growers were identified from sowing to marketing were selected for the study with a consultation of crop scientist and extension specialist. The technologies from sowing to harvest were also listed out and the adoption was studied in three point continuum *ie.* Wither they have adopted as such, adopted with partial modification and not adopted. The interview schedule was constructed by including all the components, namely nature, and type of linkages between farmer and company and extent of adoption. The data were collected from 60 gherkin growers in both the districts. The collected data were coded and tabulated. Percentage analysis and cumulative frequency method were applied for categorization of gherkin farmers.

## RESULTS AND DISCUSSIONS

### Nature and Type of Market Linkage

Studying the nature and type of linkage between the farmers and company is very important to formulate the strategies for the future plan in contract farming. It could be observed from the Table 1 that cent per cent of gherkin growers expressed that the seed materials were supplied by the company. The nonavailability of gherkin seeds in the local market and also the company has decided the variety might be the reasons for percent of farmers depending on the company for seed materials. Regarding the cultivation details cent per cent of gherkin, farmers were expressed that the cultivation details from filed preparation to a harvest of the crop were provided by the company field extension staff. The gherkin expert company decides the variety based on the market demand and the cultivation practices varies with variety. Hence the gherkin farmers have to depend on the company for the package of practices.

It could be also seen from the table that the required fertilizers were supplied by the company and it was expressed by cent per cent of the farmers. Also, need based pesticides and fungicides were supplied by the company told by cent per cent of gherkin farmers. The company field staff frequently visits the farmer's field and providing the advisory services to farmers in cultivation, manuring, weeding, irrigation, pest and disease management and harvesting. This type of linkage was expressed by cent per cent of gherkin farmers in both the Dindugal and Sivagangai districts. In gherkin cultivation, harvesting is very important operations because the harvest has to be done at alternate days intervals. If the farmers delayed the harvest for one day the size of the gherkins will increase. In marketing the lower size of gherkin will fetch a higher price and when the size increase the rate will reduce simultaneously. The harvest was done by the farmers and this was expressed by the cent per cent of farmers.

The vast majority of gherkin farmers was selling their (85.00 per cent) gherkins to the contract company. Nearly one fifth of gherkin farmers was selling their produce to a middle man. Dissatisfaction with the company people performance and to fetch high rate offered by another company might be the reasons for farmers selling the produce to a middle man. Three fourths of gherkin farmers (75.00) expressed that the transport facilities were arranged by the company to transport the harvested gherkins from the field to the company. One fourth of gherkin farmers (25.00 per cent) were expressed that farmers themselves arranged the transport facility to produce. Limited availability of company transport vehicles and covering large areas might be the reasons for non availability of company vehicles to particular sections of gherkin farmers.

Grading of harvested gherkins is one of the most important operations. The company field extension staff was carried out the grading of gherkins and this was expressed by cent per cent of gherkin farmers. This is one of the important problems faced by the gherkin farmers. The farmers were not exposed to the grading of gherkins. The rate of gherkins per kg was fixed by the company people and they have not included the farmers or they have not allowed the farmers to fix the rate for graded gherkins. This type of linkage was expressed by the cent per cent of gherkin farmers. Nearly two third of gherkin farmers (65.00 per cent) were expressed that the company people supplied the input materials like fertilizers, pesticides as credit and they will deduct the amount from the harvested produce. One third of (35.00 per cent) gherkin farmers expressed that the company people supplied the input materials against the cash.

Overall the company established good linkage mechanism with gherkin farmers in seed, extension services, the supply of input materials and had moderate linkage in the areas of transport of harvested produce and supply of inputs through credit. Also, the company administration not allowed the farmers in the areas of grading and fixing rate for produce.

## EXTENT OF ADOPTION

The adoption of cultivation practices was presented in adoption, partial adoption and non adoption in Table 2. It could be observed from the table that cent per cent (100.00 per cent) of gherkin farmers were adopted the variety recommended by the company. Non availability of alternate variety and seed materials in the market might be the reasons for cent per cent adoption of gherkin variety. Similar findings were reported by Hanumanaikar et.al. (2009). Nearly three fifth of gherkin farmers (58.33 per cent) were partially adopted the seed rate as recommended by the company and they partially adopted the seed rate. The gherkin farmers were followed the number of seeds per hole might be the reasons for partial adoption of seed rate. Slightly more than two fifth of gherkin farmers (41.67 per cent) were adopted the seed rate as per the company recommendations.

The company was supplying the chemical treated gherkin seed materials might be the reasons for cent per cent adoption of seed treatment practices. Also cent per cent of gherkin farmers had adopted the spacing as recommended by the company. The farmers have to cover the area as specified allotment of the company *ie.* If farmers deviate the spacing leads to the additional requirement of seeds and there is no possibility of getting additional seed material might be the reasons for cent per cent adoption of spacing in gherkin cultivation. Four fifth of (80.00 per cent) gherkin farmers were adopted the basal fertilizers as per the recommendation. The results are similar to the results of Venkateasn and Sundaramari. (2016). One fifth (20.00 per cent) of gherkin farmers were partially adopted the basal fertilizer application. Non availability of fertilizers for credit and high cost of fertilizers might be the reasons for partial adoption of basal

fertilizers. The results are similar to the results of Rajula shanthi (2015).

Irrigation is an important factor to get higher yield in gherkin crop. Based on this importance cent per cent of farmers were adopted the irrigation practices as per the recommendations. Regarding weeding operation in gherkin crop cent per cent of farmers were adopted the practices as per the recommendations. Crop canopy will cover the space in between gherkin crop leads to less weed population might be the reasons for cent per cent adoption of weeding operation in gherkin cultivation. Two third of gherkin farmers (65.00 per cent) were adopted the other intercultural operations like staking of gherkin crops. The results are similar to the results of Bharat Hadiya et.al (2014). Slightly more than one third of gherkin farmers was partially adopted the other intercultural operations as per the recommendations. The cost involved in the staking and other intercultural operations might be one of the reasons for partial adoption.

Nearly half of the gherkin farmers (45.00 per cent) were partially adopted the top dressing of fertilizers as per the recommendations. Irrigation with top dressing of fertilizers are important ones for getting more and quality gherkins. The high cost of fertilizers and non availability of fertilizers with a subsidy in local co-operative societies might be the reasons for partial adoption. Slightly more than half of the gherkin farmers were adopted (55.00 per cent) the top dressing of fertilizers as per the recommendations. The majority of the gherkin farmers (73.33 per cent) were adopted the pest management when it is required with consultation of the field staff of Gherkin Company. The results are similar to the results of Dhenge et.al.(2014). Slightly more than one fourth of (26.67 percent) gherkin farmers were partially adopted the pest management in gherkin cultivation.

Regarding disease management half of the gherkin farmers (51.67 percent) were partially adopted. Yellow mosaic virus is one of the important diseases in gherkin crops. Nearly half of the gherkin farmers (48.33 per cent) were adopted the disease management as per the recommendation with participation by the field staff of Gherkin Company. Timely harvest of the gherkin is a very important one to get a good price in the market. Smaller size gherkins will fetch a higher price and vice versa. Half of the gherkin farmers (55.00 per cent) were adopted the harvesting schedule as per the recommendations. Nearly half of the gherkin farmers (45.00 per cent) were partially adopted the harvesting. Non availability of labor at the time of harvest and also available during the entire period of harvesting might be the reasons for partial adoption. Those farmers those who are cultivating gherkin crops in a smaller area are managing the harvesting with the involvement of family labor. Those who are cultivated in larger area were not able to harvest as per the harvesting schedule.

None of the gherkin farmers were adopted the grading of gherkins after harvest. The gherkin company not allowed and also they have not involved the farmers in grading might be the reasons for non adoption of grading of gherkins.

## CONCLUSIONS

The study concluded that gherkin farmers were not aware about the correct package of practices and grading techniques. The company did not provide any hands on training might be reasons for non adoption of some of the recommended practices. They faced a lack of credit, delay in supply of inputs, lack of quality inputs and high cost of inputs in gherkin cultivation. Farmers suggested that the input materials should be supplied through Primary Agricultural Co-operative societies with hands on training.

## REFERENCES

1. Bharat Hadiya, Girish Deshmukh and Minaxi Bariya. 2014. Adoption of Recommended Practices of Kharif Groundnut Growers in Saurashtra Zone of Gujarat. *Indian Res. J. Ext. Edu.* 14 (3), September, 2014
2. Dhenge S. A., D. M. Mankar and P. K. Wakle. 2014. Knowledge level of farmers about Integrated Pest Management practices of paddy. *The Ecoscan. Special issue, Vol. VI:* 27-33: 2014.
3. Hanumanaikar, R. H.; Jadhav, S. N. and Ashalatha, K. V. (2009). Extent of adoption of recommended technology by the chilli growers in Tunga Bhadra project area of Bellary district of Karnataka. *Agri. Update.* 4 (3&4): 367-370
4. Manjunatha, G., and Venu Prasad H. D. (2012). Mode of Operation and Constraints of Hybrid Vegetable Seed Production under Contract Farming in Karnataka. *Environment & Ecology*, 39 (1A): 364–367.
5. Prabhu, N. (2011). State's agricultural exports increase by 21 per cent. *The Hindu.* Nov.4, 2011
6. Rajula Shanthi, T., and R. Subramaniam. 2015. Farmers' Perspective on Integrated Nutrient Management in Sugarcane. *Indian Res. J. Ext. Edu.* 15 (1), January, 2015
7. Venkatesan, P and M. Sundaramari. 2015. Scientific Rationality and Adoption of Indigenous Hill Banana Cultivation. *Indian Res. J. Ext. Edu.* 15 (1), January, 2015
8. Venu Prasad H. D. 1, Premlata Singh<sup>2</sup>, Shiv Kumar<sup>3</sup> and B. K. Singh. Performance and Constraints of Gherkin Contract Farming. *Indian Res. J. Ext. Edu.* 13 (1), January, 2013

Table 1: Nature and Type of Market Linkage between Company and Farmers

Sl. no	Nature and Type of Linkage	Number	Percent
1	Middle man	60	100.00
	Extension agent of departments	-	-
	Private agro centers	-	-
		-	-
2	Cultivation details by company	60	100.00
	Middle man	-	-
	Extension agent of departments	-	-
	Private agro centers	-	-
3	Fertilizers and pesticides supplied by	60	100.00
	Middle man	-	-
	Extension agent of departments	-	-
	Private agro centers	-	-
4	Field inspection and advisory services given by company	60	100.00
	Middle man	-	-
	Extension agent of departments	-	-
	Private agro centers	-	-
5	Harvest done by company	-	-
	Farmers	60	100.00
6	Selling the produce to company	51	85.00
	Middle man	9	15.00
7	Transport of produce from field to factory by farmers	15	25.00
	Company	45	75.00
	Middle man	-	-
8	Grading done by farmers	-	-
	Company people	60	100.00
	Middle man	-	-
9	Rate fixed by farmers	-	-
	Company people	60	100.00
	Middle man	-	-

10	Materials like seed, fertilizer etc supplied as credit	39	65.00
	For cash	21	35.00

**Table 2: Distribution of Gherkin Farmers According to their Adoption**

Sl. No	Particulars	Adoption		Partial Adoption	
		Number	Percent	Number	Percent
1	Variety	60	100	-	-
2	Seed rate	25	41.67	35	58.33
3	Seed treatment	60	100	-	-
4	Spacing	60	100	-	-
5	Basal application of fertilizers	48	80.00	12	20.00
6	Irrigation	60	100	-	-
7	Weeding	60	100	-	-
8	Other intercultural operations	39	65.00	21	35.00
9	Top dressing of fertilizers	33	55.00	27	45.00
10	Pest management	44	73.33	16	26.67
11	Disease management	29	48.33	31	51.67
12	Harvesting	33	55.00	27	45.00
13	Grading	-	-	-	-